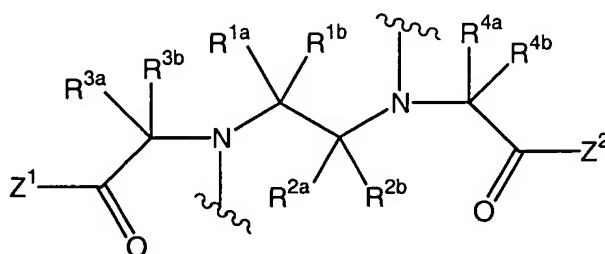


LISTING OF CLAIMS:

1. (Currently amended) A method of treating a subject with cancer by administration of a metal chelate, said method comprising the steps of:
 - (a) administering to said subject an antibody comprising an antigen recognition domain that recognizes a macrocyclic metal chelate, wherein said antibody comprises a targeting moiety that binds specifically to a cancer cell by binding with a member selected cell surface receptors and cell surface antigens, thereby forming a cell-antibody complex; and
 - (b) administering to said subject said metal chelate, thereby specifically binding said compound to said antibody to form a cell-antibody-metal chelate complex.
2. (Original) The method of claim 1, wherein said metal chelate comprises four nitrogen atoms.
3. (Original) The method of claim 2, wherein at least two of said nitrogen atoms are covalently linked to a substituted or unsubstituted ethyl bridge.
4. (Currently amended) The method of claim 2, wherein said metal chelate comprises the subunit:



wherein

Z^1 and Z^2 are members independently selected from OR , OR^1 and NR^3R^4 NR^1R^2 ,

in which

~~R^3~~ , ~~and R^4~~ R^1 and R^2 are members independently selected from H,

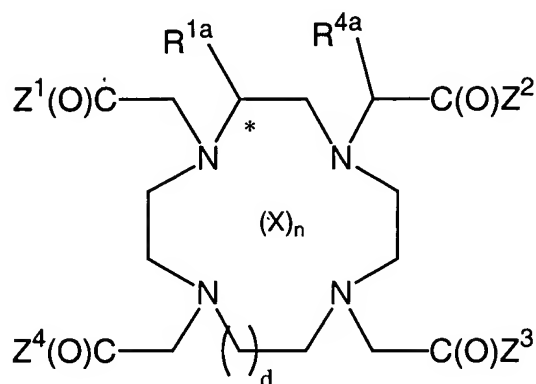
substituted or unsubstituted alkyl and substituted or unsubstituted

heteroalkyl;

10 R^{1a} , R^{1b} , R^{2a} , R^{2b} , R^{3a} , R^{3b} , R^{4a} and R^{4b} are members independently selected from
11 H, substituted or unsubstituted alkyl, substituted or unsubstituted
12 heteroalkyl, substituted or unsubstituted aryl and linker moieties.

1 5. (Original) The method of claim 1, wherein said chelate is a member selected from
2 substituted or unsubstituted DOTA and substituted or unsubstituted TETA.

1 6. (Original) The method of claim 4, wherein said chelate has the formula:



2
3 wherein

4 Z^1 , Z^2 , Z^3 and Z^4 are members independently selected from OR^1 and NR^1R^2

5 in which

6 R^1 and R^2 are members independently selected from H, substituted or
7 unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

8 X is a member selected from a lanthanide, an actinide, an alkaline earth
9 metal, a group IIIb transition metal, or a metal;

10 n is 0 or 1; and

11 d is 1 or 2.

1 7. (Original) The method of claim 1, wherein said macrocyclic metal chelate comprises a
2 reactive functional group.

1 8. (Original) The method of claim 5, wherein the carbon atom marked * is of S
2 configuration.

1 9. (Cancel)

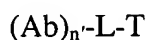
- 1 10. (Original) The method of claim 1, wherein said targeting moiety binds specifically to a
2 cell surface protein.
- 1 11. (Original) The method of claim 1, wherein the targeting moiety is covalently attached to
2 said antibody.
- 1 12. (Original) The method of claim 10, wherein the targeting moiety is an antibody.
- 1 13. (Original) The method of claim 11, wherein the targeting moiety specifically binds to a
2 protein on a cancer cell.
- 1 14. (Original) The method of claim 1, wherein the subject is a mammal.
- 1 15. (Original) The method of claim 1, wherein the mammal is a human.
- 1 16. (Original) A method of *in vivo* imaging, said method comprising the steps of :
2 (a) administering to a subject an antibody comprising an antigen recognition
3 domain that recognizes a macrocyclic metal chelate, wherein said antibody comprises a
4 recognition moiety that binds specifically to a cell, thereby forming a cell-antibody complex;
5 (c) administering to said subject said metal chelate, thereby specifically binding
6 said compound to said antibody to form a cell-antibody-metal chelate complex; and
7 (d) detecting said cell-antibody-metal chelate complex.
- 1 17. (Currently Amended) The method of claim 16, wherein said metal chelate comprises
2 four nitrogen atoms.
- 1 18. (Original) The method of claim 16, wherein the step of detecting is by positron emission
2 tomography.
- 1 19. (Original) The method of claim 16, wherein the step of detecting is by magnetic
2 resonance imaging.
- 1 20. (Original) The method of claim 16, wherein the step of detecting is by detection of
2 lanthanide luminescence.

21. (Original) The method of claim 16, further comprising, between steps (a) and (b),
administering a clearing agent to said subject.

22. (Original) The method of claim 16, wherein the subject is a mammal.

23. (Original) The method of claim 22, wherein the mammal is a human.

24. (Currently amended) ~~A composition having~~ The method according to claim 1 wherein
said antibody has the structure:



wherein,

n' is an integer from 1-10;

Ab represents an antibody comprising an antigen recognition domain that
recognizes a macrocyclic metal chelate;

L is a chemical bond or linking group that may contain one or more functional
groups; and

T is said targeting moiety.

25. (Currently amended) ~~The composition~~ method of claim 24, wherein said metal chelate
comprises four nitrogen atoms.

26. (Currently amended) ~~The composition~~ method of claim 24, wherein said targeting
moiety is an antibody that binds specifically to a cell surface antigen.

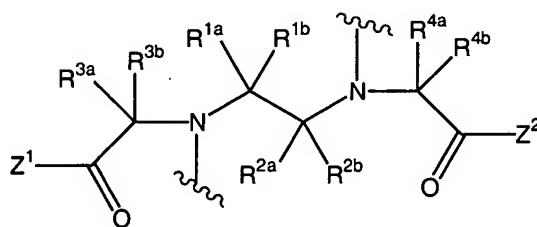
27. (Original) ~~A~~ The method according to claim 24 wherein said antibody is administered to
said subject as a pharmaceutical composition comprising the composition of claim 24, said
antibody and a pharmaceutically acceptable carrier.

IN THE SPECIFICATION

The paragraph numbers cited in the following section are with reference to published U.S. Patent Publication No. 2004/0198962.

Please replace paragraph 271 with the following paragraph.

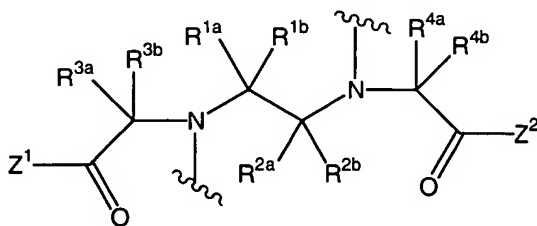
[0271] In a preferred embodiment, the chelate includes a substituted or unsubstituted ethyl bridge that covalently links at least two of the nitrogen atoms. An exemplary ethyl bridge is shown in the formula below:



wherein Z¹ and Z² are members independently selected from OR¹ and NR¹R², in which R¹ and R² are members independently selected from H, substituted or unsubstituted alkyl, and substituted or unsubstituted heteroalkyl. The symbols R^{1a}, R^{1b}, R^{2a}, R^{2b}, R^{3a}, R^{3b}, R^{4a} and R^{4b} represent members independently selected from H, substituted or unsubstituted alkyl, substituted or unsubstituted heteroalkyl, substituted or unsubstituted aryl and linker moieties.

A marked up version of paragraph 271 is provided below for the convenience of the Examiner.

[0271] In a preferred embodiment, the chelate includes a substituted or unsubstituted ethyl bridge that covalently links at least two of the nitrogen atoms. An exemplary ethyl bridge is shown in the formula below:



wherein Z^1 and Z^2 are members independently selected from OR , OR^1 and $\text{NR}^3\text{R}^4\text{NR}^1\text{R}^2$, in which R^3 and R^4 , R^1 and R^2 are members independently selected from H, substituted or unsubstituted alkyl, and substituted or unsubstituted heteroalkyl. The symbols R^{1a} , R^{1b} , R^{2a} , R^{2b} , R^{3a} , R^{3b} , R^{4a} and R^{4b} represent members independently selected from H, substituted or unsubstituted alkyl, substituted or unsubstituted heteroalkyl, substituted or unsubstituted aryl and linker moieties.